

CCDC91 (D-18): sc-242379

BACKGROUND

CCDC91 (coiled-coil domain-containing protein 91), also known as GGABP (GGA-binding partner), is a 441 amino acid membrane protein that exists as three alternatively spliced isoforms and forms a homodimer. Interacting with GGA1, GGA2 and γ 1-Adaptin, CCDC91 is involved in the regulation of membrane traffic through the trans-Golgi network (TGN). The gene that encodes CCDC91 consists of approximately 446,702 bases and maps to human chromosome 12p11.22. Encoding over 1,100 genes within 132 million bases, chromosome 12 makes up about 4.5% of the human genome. A number of skeletal deformities are linked to chromosome 12, including hypochondrogenesis, achondrogenesis and Kniest dysplasia. Noonan syndrome, which includes heart and facial developmental defects among the primary symptoms, is also linked to chromosome 12. Chromosome 12 is home to a homeobox gene cluster, which encodes crucial transcription factors for morphogenesis, and the natural killer complex gene cluster, encoding C-type lectin proteins which mediate the NK cell response to MHC I interaction.

REFERENCES

1. Delgado Carrasco, J., et al. 2001. Achondrogenesis type II-hypochondrogenesis: radiological features. Case report. *An. Esp. Pediatr.* 55: 553-557.
2. Yokoyama, T., et al. 2003. A case of Kniest dysplasia with retinal detachment and the mutation analysis. *Am. J. Ophthalmol.* 136: 1186-1188.
3. Lui, W.W., et al. 2003. Binding partners for the COOH-terminal appendage domains of the GGAs and gamma-adaptin. *Mol. Biol. Cell* 14: 2385-2398.
4. Collins, B.M., et al. 2003. Structural basis for binding of accessory proteins by the appendage domain of GGAs. *Nat. Struct. Biol.* 10: 607-613.
5. Forzano, F., et al. 2007. A familial case of achondrogenesis type II caused by a dominant COL2A1 mutation and "patchy" expression in the mosaic father. *Am. J. Med. Genet. A* 143: 2815-2820.
6. Mardones, G.A., et al. 2007. The trans-Golgi network accessory protein p56 promotes long-range movement of GGA/clathrin-containing transport carriers and lysosomal enzyme sorting. *Mol. Biol. Cell* 18: 3486-3501.
7. Wainwright, H. and Beighton, P. 2008. Visceral manifestations of hypochondrogenesis. *Virchows Arch.* 453: 203-207.
8. Lo, F.S., et al. 2009. High resolution melting analysis for mutation detection for PTPN11 gene: applications of this method for diagnosis of Noonan syndrome. *Clin. Chim. Acta* 409: 75-77.

CHROMOSOMAL LOCATION

Genetic locus: CCDC91 (human) mapping to 12p11.22.

SOURCE

CCDC91 (D-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CCDC91 of human origin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-242379 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CCDC91 (D-18) is recommended for detection of CCDC91 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other CCDC family members.

CCDC91 (D-18) is also recommended for detection of CCDC91 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for CCDC91 siRNA (h): sc-95897, CCDC91 shRNA Plasmid (h): sc-95897-SH and CCDC91 shRNA (h) Lentiviral Particles: sc-95897-V.

Molecular Weight of CCDC91 isoforms: 50/47/46 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.